REMARKS

Claims 1-39 are pending in the application. Claims 1-13, 15-17 and 19-38 are rejected. Claims 14 and 18 are allowed. Claim 39 is objected to but would be allowable if written in independent form. Applicant has amended claim 31 to correct an inadvertent error made in the last amendment.

Specification

The Abstract of the Disclosure is objected to because the words "means" and "said" are used. A corrected Abstract is submitted.

Claim Rejections – 35 USC 103

Claims 1-5, 8, 13, 19-23, 25, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura (USPN 5,570,362). This rejection is traversed for at least the following reasons.

Nishimura '362

As a preliminary matter, Applicants note that Nishimura concerns a method for transferring variable length data in variable length cells in a manner that otherwise is very similar to the fixed length system of ATM. In essence, this method is equivalent to ATM except the ATM adaptation layer (AAL) is bypassed and the labeled multiplexing mode (LMM) layer (ATM layer) is implemented as a variable length ATM cell (see figure 4A).

The intent of Nishimura is to reduce the high percentage of overhead imposed by the short length (53 byte) ATM cells. For example, at *Col 1, lines 15*-20, the patent states:

> Fixed length cells of 53 bytes have been proposed as the standard unit for transfer in ATM systems, but when such fixed length cells are used, it is not possible to make efficient use of the transmission band due to the high proportion of the control data. Accordingly, improvement has been desired.

And at Col 2, lines 15-20, Nishimura states:

> That is, the present invention has as its object to provide a system for transferring ATM cells which enables the cell length to be changed adaptively in accordance with the amount of the burst-like user information.

As a preliminary matter, Applicant emphasizes that Nishimura is silent on the unique problems caused by wireless applications. The focus of Nishimura is on making efficient use of transmission channels by maintaining the burst-type user information at an optimum length. There is no discussion at all of the burst error correction needed in such channels, which is a focus of the present invention. Specifically, the stated purpose of the claimed invention is "protecting ATM cells transmitted over high speed wireless channels." Indeed, as noted subsequently, Nishimura is wholly devoid of teachings related to the claimed details of Applicants' invention. Applicants respectfully observe that the Examiner has had to resort to distortions in the meaning of well established terms to create an argument in support of his rejection. As demonstrated subsequently, there is no basis for the rejections as Nishimura has absolutely nothing to do with the present invention, and an early allowance is earnestly solicited.

Claims 1, 19 and 21

With regard to claims 1, 19, and 21, the Examiner asserts that Nishimura discloses a method for encoding ATM cells comprising all of the claimed steps. Applicants respectfully submit that these steps are not taught by Nishimura.

First, the Examiner asserts that the first step in each of the rejected claims of receiving an ATM cell stream is taught at col. 5, lines 6-22 of Nishimura. However, Applicants respectfully submit that Nishimura does not receive an "ATM stream comprised of a plurality of ATM cells" as claimed. Applicants submit that the teaching at the cited portion of the patent specification does not relate to "receiving" an ATM stream at all. The text is consistent with the teaching in Nishimura at col. 2, line 21-22 that the system "composes variable length ATM cells."

Second, the Examiner asserts that Nishimura teaches the claimed feature of assembling "a header frame," with reference to col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49, with reference to rejected claims 1 and 19. The Examiner offers a broad definition of a "header" as being a "frame" and asserts that the header is the "minimum unit of transfer." This assertion clearly demonstrates the unprecedented distortion of conventional technological terminology in formulating this rejection. The term "header frame" must be interpreted

according to the use in the specification as a frame having information from a plurality of headers. There is only one use of that term in the specification and one skilled in the art would understand its meaning. No importation of limitations from the specification into the claims is needed in order to clearly distinguish the teachings in Nishimura that are relied upon by the Examiner.

Nishimura refers to a "minimum unit of transfer" in the context of the amount of information that is transmitted between CRCs. In Figure 11A, Nishimura shows that for every 10 "transfer units," a CRC is inserted in order to facilitate the detection of transfer unit boundaries. Clearly, the minimum unit has payload data. Further, Applicants note that the definition of a "frame" in Newton's Telecom Dictionary includes the concept that there is a "header" and a "payload" for every frame. The "header" referred to by the Examiner cannot be considered to be a "frame," since it contains no "payload" - the header describes the parameters for the subsequently transmitted bits in the payload. Taken together, this header and subsequent payload do constitute a frame as understood by one skilled in the art and the entire telecom industry. The claimed invention is clearly distinct from the implementation in Nishimura.

Applicants note, for example that Nishimura uses the terms properly in referring at col 4, line 67 – Col 5, line 1 to:

> the length of the payload of the variable length ATM cell is made a whole multiple (m, where m>=1) of n-octets.

Given the Examiner's argument that a "header frame" consists only of a header, then there is no room for a "payload" of the type referred to by Nishimura. Applicants respectfully submit that the Examiner cannot legitimately explain how a "header" can be constructed in Nishimura to be a frame without any affiliated data.

Third, the Examiner asserts that the claimed feature of "assembling a payload frame" as recited in claims 1 and 21 is taught at col. 5, lines 6-54 and col. 6, line 32-col. 7, line 49 of Nishimura. However, Applicants respectfully submit that such assembly of a frame includes more than just a payload and more than just a header, with reference to the above argument and the teaching at col 5, lines 10-11 that "a corresponding header and trailer are added."

Fourth, the Examiner asserts that the Nishimura reference teaches "placing idle/unassigned cells in a selected portion of the payload frame" as recited in claim 1, with reference to col. 6, line 46-col. 7, line 9 of Nishimura. This assertion is unsupported.

Applicants note that the first limitation of claim 1 is "receiving an ATM cell stream comprised of a plurality of ATM cells." Some of these cells will be unused, either idle or unassigned. Note that each cell is a complete unit in the sense that it has a header and a payload (see, for example, figure 1 of Nishimura). The Examiner seems to be stating that placing idle data into the payload section of the frame (note that this is not even a "payload frame" of the claimed invention) to make the length of the frame an even number is equivalent to placing some of the received data into a selected portion of a frame.

With regard to this feature, the Examiner expressly admits that Nishimura does not disclose receiving an ATM cell stream comprised of a plurality of ATM cells; detecting idle/unassigned cells within said cell stream; assembling a header frame made up of headers of a number of said plurality of ATM cells; assembling a payload frame made up of pay-loads of said number of said plurality of ATM cells; and placing some of the detected idle/unassigned cells in a selected portion of the payload frame. However, the Examiner asserts that Nishimura additionally discloses that, where a typical ATM cell stream wastes bandwidth due to overhead, Nishimura's ATM cell stream is more bandwidth efficient. The Examiner takes official notice that protocol conversions are well known in the art.

Here, Applicants wish to note again that the stated purpose of the claimed invention is "protecting ATM cells transmitted over high speed wireless channels." This is often counter to the bandwidth efficiency advocated by Nishimura, since the necessary error correction procedures often lead to what appears to be a LESS bandwidth efficient usage of the channel. By carefully taking into consideration the wireless channel attributes, as done by the subject inventors, the system is made more efficient by the avoidance of retransmissions necessitated by burst errors on the wireless channel. Nishimura is completely silent on this issue and nothing in the reference or the conventional knowledge in the art would lead to this feature.

The Examiner goes on to assert that Nishimura suggests receiving an ATM cell stream comprised of a plurality of ATM cells, where the ATM cell stream uses bandwidth inefficiently; detecting idle/unassigned cells within said cell stream in order to remove the idle/unassigned

cells to increase bandwidth efficiency; assembling a header frame made up of headers of a number of said plurality of ATM cells, where Nishimura's header contains information similar to an ATM header (col. 5, lines 29-36) such that the VPINCI information of the cells in the cell stream is preserved; assembling a payload frame made up of pay-loads of said number of said plurality of ATM cells; and placing some of the detected idle/unassigned cells in a selected portion of the payload frame in order to have a cell of the correct length. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to receive an ATM cell stream comprised of a plurality of ATM cells; detect idle/unassigned cells within said cell stream; assemble a header frame made up of headers of a number of said plurality of ATM cells; assemble a payload frame made up of pay-loads of said number of said plurality of ATM cells; and place some of the detected idle/unassigned cells in a selected portion of the payload frame in order to increase the efficiency of bandwidth use in an ATM cell stream.

Applicants respectfully submit that the Examiner has failed to directly address the limitation of '**detecting idle/unassigned cells within said cell stream**' that appears in claim 1. The limitation clearly calls for an action, namely "detecting" cells. The Examiner has failed to demonstrate how this action is performed, or even implied, by the reference.

For all the foregoing reasons, Applicants respectfully submit that all of the rejected independent claims 1, 19 and 21 are patentable over Nishimura.

Claim 2

With regard to claim 2, the Examiner asserts that Nishimura discloses that the header frame is arranged in an i row x n column matrix, with reference to col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7,line 49 of the reference. The Examiner states that, as broadly defined, the "header" can be viewed as containing one row and n columns where each column contains an octet or a bit of information (e.g. a value in a 1x4 matrix would be ABCD).

Applicant respectfully submits that this position of the Examiner ignores the conventional use of terminology in the art, the background teachings of the specification (without incorporating them into the claims) and the plain meaning of the terms in the claim. A matrix clearly contemplates an array of columns and rows, that is a two dimensional arrangement, not vector. A single line is not a matrix by any understanding of the terminology in the

communications art. No one would ever refer to a line as a matrix, especially in the context of the overall claimed invention. There is no capability for Nishimura to implement a matrix, as claimed.

In short, Nishimura does not have the limitations of claim 1, including a "header frame," in combination with a "matrix" as claimed.

Claims 3 and 22

The Examiner asserts that claims 3 and 22 are obvious in view of the disclosure in Nishimura that the payload frame is arranged in an j row x m column matrix (col. 5, lines 6-54 and col. 6, line 32-col. 7, line 49), where, as broadly defined, the payload can be viewed as containing one row and m columns where each column contains an octet of information (e.g. a value in a 1 x4 matrix would be ABCD).

Again, Applicants respectfully submit that the prior art does not teach the claimed combination as recited in parent claims 1 and 21, including header frame plus matrix.

Claim 4

The Examiner asserts that claim 4 is obvious in view of an alleged teaching in Nishimura of a step of assembling said header frame further comprises: partitioning said header frame comprised of headers of an n number of ATM cells into a first section and a second section; said first section comprised of n -x number of headers of said n number of ATM cells and an added cell made up of control bytes; and said second section comprised of x number of headers of said n number of ATM cells (col. 5, lines 29-36) where "x" could be 0 and where "comprising" is a broad phrase which only requires one set of header information as long as the header information is the same for all of the cells in the frame (i.e. the header contains the VP and VC information for all of the cells in the frame where all the cells have the same VP and VC information).

Applicants respectfully submit that the claim is patentable for the reasons given for claim 1.

Claim 5

The Examiner rejects 5, asserting that Nishimura discloses that the step of "assembling said header frame" further comprises: adding a predetermined number of bytes of Header Error Correction Code (HEC) to said header frame (col. 6, lines 6-1 7 and col. 10, lines 24-39).

The HEC in Nishimura is clearly just the standard HEC as defined in the ATM standards. The HEC is used to find the header boundary, as is clear from Col 10, lines 35-37:

> each unit of transfer is examined to see if the sixth octet in it fits as the HEC of the first to fifth octets before it.

Also, the claim is patentable for the reasons given with respect to parent claim 1.

Claim 8

With regard to claim 8, the Examiner asserts that Nishimura discloses that the step of assembling said payload frame further comprises: adding a predetermined number of bytes of Payload Error Correction Code (PECC) to said payload frame (col. 9, lines 29-43).

Applicants note that at the beginning of col 9, line 29 it is stated that:

> FIGS. 11A and 11B are views explaining the method of establishing synchronization at physical layers.

Applicants respectfully submit that there is no mention of payload error correction in Nishimura. There is a 1-octet CRC inserted every 60 octets (Fig 11A) that is used merely to synchronize the incoming stream (Fig 11B). This incoming stream includes both headers and payloads and thus, no differentiation is made between headers and payloads as in the subject invention.

Claims 13 and 25

Regarding independent claims 13 and 25, the Examiner asserts that Nishimura discloses receiving an information stream (col. 5,lines 6-22); assembling a header frame (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7,line 49), where, as broadly defined, the header is a frame since the header is the minimum unit of transfer; assembling a payload frame (col. 5, lines 6-54 and col. 6, line 32-col. 7, line 49); adding Payload Error Correction Code to the payload (col. 9, lines 29-43); placing idle/unassigned cells in a selected portion of the payload frame (col. 6, line 46-col. 7, line 9); and storing a count of the number of idle/unassigned cells contained in the payload frame in a second control byte within a trailer frame (col. 6, line 62-col. 7, line 9).

The Examiner admits that Nishimura does not expressly disclose detecting idle/unassigned cells within said cell stream, assembling an ATM frame having a header frame made up of headers of a first predetermined number of said plurality of ATM cells and a payload

frame made up of payloads of said first predetermined number of said plurality of ATM cells, placing up to a second predetermined number of the detected idle/unassigned cells in a selected portion of the payload frame, and adding Payload Error Correction Code to those idle/unassigned cells which are placed in said selected portion of said payload frame; and storing an idle/unassigned cell indicator in a first control byte in said header frame to be transmitted over said wireless link which indicates whether or not idle/unassigned cells have been placed at said selected portion of said payload frame; and storing a count of the number of idle/unassigned cells contained in the payload frame in a second control byte within said header frame.

The Examiner asserts, however, that Nishimura additionally discloses that, where a typical ATM cell stream wastes bandwidth due to overhead, Nishimura's ATM cell stream is more bandwidth efficient. The Examiner takes official notice that protocol conversions are well known in the art. The Examiner concludes that Nishimura suggests receiving an ATM cell stream comprised of a plurality of ATM cells, where the ATM cell stream uses bandwidth inefficiently, detecting idle/unassigned cells within said cell stream in order to remove the idle/unassigned cells to increase bandwidth efficiency, assembling an ATM frame having a header frame made up of headers of a first predetermined number of said plurality of ATM cells, where Nishimura's header contains information similar to an ATM header (col. 5, lines 29-36) such that the VPWCI information of the cell stream is preserved, and a payload frame made up of payloads of said first predetermined number of said plurality of ATM cells, placing up to a second predetermined number of the detected idle/unassigned cells in a selected portion of the payload frame in order to have a cell of the correct length, and adding Payload Error Correction Code to those idle/unassigned cells which are placed in said selected portion of said payload frame in order to ensure proper delivery of the frame; and storing an idle/unassigned cell indicator in a first control byte in said header frame to be transmitted over a link which indicates whether or not idle/unassigned cells have been placed at said selected portion of said payload frame; and storing a count of the number of idle/unassigned cells contained in the payload frame in a second control byte within said header frame where storing control information in a header is equivalent to storing the information in a trailer. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to detect idle/unassigned cells within said cell stream, assemble an ATM frame having a header frame

made up of headers of a first predetermined number of said plurality of ATM cells and a payload frame made up of payloads of said first predetermined number of said plurality of ATM cells, place up to a second predetermined number of the detected idle/unassigned cells in a selected portion of the payload frame, and add Payload Error Correction Code to those idle/unassigned cells which are placed in said selected portion of said payload frame; and store an idle/unassigned cell indicator in a first control byte in said header frame to be transmitted over a link which indicates whether or not idle/unassigned cells have been placed at said selected portion of said payload frame; and store a count of the number of idle/unassigned cells contained in the payload frame in a second control byte within said header frame in order to increase the efficiency of bandwidth use in an ATM cell stream.

The Examiner admits that Nishimura does not expressly disclose that the link is a wireless link; however, the Examiner asserts that Nishimura does disclose that the variable length ATM cells use bandwidth more efficiently than normal ATM cells (col. 4, lines 19-5 1). Examiner takes official notice that it is well known in the art that bandwidth efficiency is important on wireless links. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to use this invention on a wireless link, where a stream of normal ATM cells is received over a wire link and the variable length ATM cells are transmitted over the wireless link.

Applicant respectfully submits that this claim contains limitation similar to those in claim 1 and, for all of the reasons given for claim 1, these claims would be patentable.

Claim 20

The Examiner asserts that as to dependent claim 20, Nishimura discloses that the step of "assembling said header frame" further comprises: partitioning the header frame comprised of headers of said predetermined number of ATM cells into a first section and a second section; the first section being comprised of a second predetermined number of headers from the first predetermined number of ATM cells and an added cell made up of control bytes; and said second section comprised of having a third predetermined number of headers from said first predetermined number of ATM cells (col. 5, lines 29-36) where "predetermined number" is a broad phrase which includes the number 0.

Clearly, on the basis of the teachings in the specification and the understanding in the art of the limitation of this claim, the predetermined number is a predetermined positive number. It is unreasonable and inconsistent with the principles of claim interpretation for the Examiner to state that a non-disclosed parameter is present but cannot be found because it has a value of zero. Moreover, the requirement that there be a 'second' predetermined number requires that there is more than zero in the second number. The Examiner is reducing the claim as it would be understood to be meaningless. Nothing in the specification nor common understanding of one skilled in the art would suggest that Applicants would add limitations that are meaningless, that is equal to zero. Applicants respectfully submit that the Examiner's strained interpretation has no foundation and would not be sustained on appeal. Allowance is respectfully requested.

Claim 22

The Examiner rejects claim 22 by asserting that Nishimura discloses that the step of assembling said payload frame further comprises: adding a predetermined number of bytes of Payload Error Correction Code (PECC) to all i number of rows of said payload frame (col. 9, lines 3 1-47) where i is 20 (add to every other 6-octet units).

Applicants submit that this claim is allowable for the same reasons given for parent claim 21.

Claim 31

Claim 31, is rejected for the reasons given for clams 1-3 and 13, because the Examiner believes that Nishimura suggests an apparatus for receiving an ATM cell stream sequence via a wireless link (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49), encoding said ATM cell stream for transmission of data via a wireless link (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49), receiving and decoding encoded wireless data received via said wireless link and transmitting another ATM cell stream sequence via said wireline link (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49), comprising: a wireline interface for receiving said cell stream sequence from said wireline link and transmitting said another cell stream sequence (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49); an encoder receiving cell stream data from said wireline interface, encoding said cell stream data and outputting encoded cell data (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49); a wireless interface for receiving said encoded cell data from said encoder, transmitting said encoded cell

data via said wireless link and receiving previously encoded cell data (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49); a decoder receiving said previously encoded cell data from said wireless interface, decoding said previously encoded cell said data and outputting said another cell stream sequence to said wireline interface; and a control unit for controlling said interfaces, encoder and decoder (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49).

Applicants respectfully submit that there is no teaching of any 'wireless" communication in Nishimura and, thus, the reference is not applicable to the claimed invention. Moreover, this claim would be allowable for reasons previously given for claims 1-3 and 13.

Claims 6, 9, 24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura (USPN 5,570,362) as applied to claims 5, 8, and 23 above, and further in view of Matsushita (USPN 5,608,738). This rejection is traversed for at least the following reasons.

As a preliminary matter, Applicants note that Matsushita is directed to adding error correction coding to a generic packet based system. Bits in the same position in a number of packets are taken together to generate a error correction frame which is then transmitted as a number of independent error correction packets (see Fig. 2). Applicant notes that new, independent, packets are created and that this technique specifically ignores the error correction needs of the headers, as recited in Col. 1, line 63, where it is expressly stated that the disclosed technique is based upon "[E]xcluding the headers of the data packets."

Applicants note that the primary benefit of the Matsushita technique over the prior art appears to be its ability to recover packets that have been completely lost due to channel errors.

Claim 6

Claim 6 is rejected as obvious over Nishimura in view of Matsushita because, as the Examiner admits, Nishimura does not expressly disclose that the Header Error Correction Code is generated using a Reed-Solomon coding scheme. Matsushita teaches, in a packet communication system, using a Reed-Solomon coding scheme to generate correction code since Reed-Solomon is a well-known error correction code (col. 4, line 45-col. 5, line 62). The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time

of the invention to use a Reed-Solomon coding scheme to generate correction code since Reed-Solomon is a well-known error correction code.

Applicants respectfully submit that the use of an R-S scheme is common knowledge. Masushita has no additionally relevant teaching. However, it is significant to point out again that Nishimura is faced with a substantive deficiency, namely that Nishimura has no header frame, as already noted with regard to claim 1.

Claims 9 and 24

Regarding claims 9 and 24, the Examiner admits that Nishimura does not expressly disclose that the Payload Error Correction Code is generated by a Reed-Solomon coding scheme. The Examiner asserts, however, that Matsushita teaches, in a packet communication system, using a Reed-Solomon coding scheme to generate correction code since Reed-Solomon is a well-known error correction code (col. 4, line 45-col. 5, line 62). The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to use a Reed-Solomon coding scheme to generate correction code since Reed- Solomon is a well-known error correction code.

With reference to previous arguments, Applicants respectfully submit that Nishimura has no "payload frame."

Claim 27

As to claim 27, the Examiner admits that Nishimura does not expressly disclose generating a header syndrome; and identifying bits in error using said header syndrome; wherein when a single bit in error is identified in the header, correction of said bit in error is performed, and when multiple bits in error are identified in the header, an ATM cell containing said multiple bits in error is dropped and replaced by an idle/unassigned cell. The Examiner states that Matsushita teaches, in a packet communication system, using a Reed-Solomon coding scheme (header syndrome) to generate correction code since Reed-Solomon is a well-known error correction code (col. 4, line 45-col. 5,line 62).

Applicant respectfully submits that this assertion is in error as Matsushita teaches away from coding headers, as is clear from the recitation at Col. 2, lines 26-29:

The packet forming section 12 forms error correction code packets by using data portions obtained by removing headers from a plurality of data packets stored in the packet storage section 11.

The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to generate a header syndrome (Reed-Solomon) and identify bits in error using said header syndrome wherein when a single bit in error is identified in the header, correction of said bit in error is performed in order to correct bit errors. However, the Examiner concedes that Nishimura in view of Matsushita does not expressly disclose that an ATM cell containing said multiple bits in error is dropped and replaced by an idle/unassigned cell. Nonetheless, Examiner takes official notice that this is well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to drop a cell that cannot be corrected as is well known in the art.

Applicant respectfully submits that neither reference suggests an idle/unassigned cell would replace a cell if the error correction routine identified an uncorrectable error in the header of that cell. Applicant submits that there is nothing in either reference that would suggest that unusable data should be added to their system architecture. Once again, the Examiner makes a strained and unsupported assertion that goes beyond any reasonable interpretation of the references by one skilled in the art.

Claims 7, 26, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura (USPN 5,570,362) as applied to claims 1 and 25 above, and further in view of Naimpally et a1 (USPN 5,650,825). This rejection is traversed for at least the following reasons.

Applicants note that in Naimpally, the idle bits in a possibly public data stream are replaced with private data to make use of the otherwise wasted resource.

Claims 7 and 26

The Examiner admits that with regard to claims 7 and 26, Nishimura does not expressly disclose that the step of placing idle/unassigned cells further comprises: adding extra Payload Error Correction Code in any idle/unassigned cells which are placed in said selected portion of

said payload frame. The Examiner asserts, however, that Nishimura does disclose adding Payload Correction Code to a payload frame (col. 9, lines 29-43). The Examiner looks to Naimpally for a teaching of using idle/unassigned cells to transport additional information in order to take advantage of otherwise wasted bandwidth (col. 4, lines 15-40; col. 4, line 66-col. 5, line 5; and col. 12, lines 1-7). The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to add extra Payload Error Correction Code in any idle/unassigned cells which are placed in said selected portion of said payload frame in order to take advantage of otherwise wasted bandwidth by increasing the level of error correction in the system.

Applicants respectfully submit that Naimpally teaches the addition of private data to an otherwise public (broadcast) transmission system. There is no motivation to combine Naimpally with a private link. Moreover, the claims would be patentable for the reasons given for their respective parent claims.

Claim 28

With regard to claim 28, the Examiner admits that Nishimura does not expressly disclose inserting error correction code into some of said idle/unassigned cells; setting a first information field within said frame at a first state when error correction code has been inserted into any idle/unassigned cells within said frame; and setting said first information field at a second state when no error correction code has been inserted into idle/unassigned cells within said frame.

The Examiner asserts, however, that Nishimura does disclose adding Payload Correction Code to a payload frame (col. 9, lines 29-43).

Applicants submit that there is no teaching of a payload frame in Nishimura.

The Examiner also states that Naimpally teaches using idle/unassigned packets to transport additional information in order to take advantage of otherwise wasted bandwidth, citing the teachings at col. 4, lines 15-40; col. 4, line 66-col. 5, line 5; and col. 12, lines 1-7).

Applicants submit, however, that there is no teaching in Naimpally of any public/private data transfer.

The Examiner asserts that Naimpally also teaches including an indication of whether or not information has been included in the idle/unassigned packets, with reference to col. 4, lines 52-65) where it is implicit that this is done in order to ensure that the data is properly received.

Applicants note that this is the program identity field (PID) that is used in the transport stream of Naimpally. It identifies the source of the current packet, but does not indicate the status of cells within a currently transmitted frame, as in the subject invention.

The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to insert error correction code into some of said idle/unassigned cells; set a first information field within said frame at a first state when error correction code has been inserted into any idle/unassigned cells within said frame; and set said first information field at a second state when no error correction code has been inserted into idle/unassigned cells within said frame in order to take advantage of otherwise wasted bandwidth by increasing the level of error correction in the system.

In sum, Applicants respectfully submit on the foregoing basis and the arguments set forth with regard to similar limitations in claim 1, that no reference teaches all of the feature of the claimed invention, including detection of idle cells or inserting data into those detected cells, as claimed.

Claim 29

The Examiner asserts that Nishimura in view of Naimpally suggests storing a number of idle/unassigned cells used for extra error correction code in a second information field within said frame when said first information field has been set at said first state (Nishimura: col. 6, line 62-col. 7, line 9 and Naimpally: col. 4, lines 15-40; col. 4, line 66-col. 5, line 5; and col. 12, lines 1-7). The Examiner states that Nishimura teaches storing a number (length) of effective and ineffective data (Nishimura: col. 6, line 62-col. 7, line 9). Also, the Examiner asserts that Naimpally teaches storing an indicator which indicates if data is stored in idle frames (Naimpally: col. 4, lines 15-40; col. 4, line 66-col. 5, line 5; and col. 12, lines 1-7). Thus, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to store a number of idle/unassigned cells used for extra error correction code in

a second information field within said frame when said first information field has been set at said first state in order to allow the receiver to determine what is effective and ineffective data.

Because of its dependency on independent claim 28, Applicants submit that the claim is patentable for the same reasons given for that claim.

24. Claims 10-12, 17, 32, and 33 are rejected under 35 U.S.C. 1 O3(a) as being unpatentable over Nishimura (USPN 5,570,362) in view of Woo et a1 (USPN 5,425,101). This rejection is traversed for at least the following reasons.

Applicants note that Woo et al is directed to simultaneously authorizing a number of virtual channels received over a single transmission medium such as wireless or satellite. It is pertains to very high transport level issues, which makes it totally irrelevant to the subject invention and the other references in this discussion. In connection with the discussion at col. 9, line 45, Woo cites the patent to Birch (5,583,562) for a teaching of interleaving and coding on a wireless link. However, even Woo incorporating Birch is deficient as in dropping HEC bytes, trpalcing HEC data with other data and replacing dropped data by an unassigned cell. Indeed, as seen in Fig. 2B, the frame has an area for packets with extra error protection, not less.

Claim 10

With regard to claim 10, the Examiner asserts that Nishimura discloses a method for transmitting ATM cells received from a wireline interface over a wireless link comprising: receiving an ATM cell stream comprised of a plurality of ATM cells from said wireline interface (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49); encoding said plurality of ATM cells, wherein said encoding step includes the steps of detecting idle/unassigned cells within said cell stream (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49), assembling a header frame made up of headers of a first predetermined number of said plurality of ATM cells arranged in a first matrix (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49), where, as broadly defined, the header is arranged in a matrix while it is in a buffer, assembling a pay-load frame made up of payloads of said first predetermined number of said plurality of ATM cells arranged in a second matrix (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49) where, as broadly defined, the header is arranged in a matrix while it is in a buffer, and placing up to a second predetermined number of the detected idle/unassigned cells to an end of the

payload and header frames starting with a last column of each of said frames (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49), where the predetermined number could be any number including zero and one. The Examiner admits that Nishimura does not disclose transmitting said predetermined number of said plurality of ATM cells over said wireless link by interleaving said header frame and said payload frame. The Examiner asserts that Woo teaches, in a wireless system, interleaving frames together in order to reduce the impact of errors on the data stream (col. 9, lines 28-43).

Applicants submit that interleaving is well known in the industry and Woo et al does not remedy the deficiencies of the Nishimura reference and, indeed, has no particular teaching that is pertinent to the case at hand.

Nonetheless, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to transmit the predetermined number of the plurality of ATM cells over the wireless link by interleaving the header frame and the payload frame in order to reduce the impact of errors on the data stream.

On the basis of the arguments made previously with respect to Nishimura, the claim would be patentable.

Claim 11

As to claim 11, the Examiner submits that Nishimura in view of Woo suggests that the step of transmitting further comprising: interleaving by transmitting a third predetermined number of bytes from said payload frame for every byte transmitted from said header frame (Nishimura: col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49 and Woo: col. 9, lines 28-43) where the predetermined number could be any number.

Applicants submit that the interleaving in Woo is traditional and contains no concept of header frames, payload frames and interleaving one based on the number of bytes in either. The claim would be patentable for reasons given for its parent claim.

Claim 12

As to claim 12, the Examiner asserts that Nishimura in view of Woo disclose adding a synchronizing pattern to said header and payload frames (Nishimura: col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49 and Woo: col. 4, lines 50-57). The Examiner admits that Nishimura in view of Woo do not expressly disclose adding a two byte synchronization pattern.

However, the Examiner asserts that it is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The Examiner asserts that the burden of showing criticality is on applicant. The Examiner concludes that, since Nishimura in view of Woo disclose adding a synchronization pattern, it would have been obvious add any length of synchronization pattern, including two bytes, absent a showing of criticality by Applicant.

Applicant need not show criticality, as none of the cited references have header or payload frames, and therefore cannot suggest adding synchronization patterns to them.

Claim 17

Claim 17 is rejected on the basis of Nishimura in view of Woo based on an alleged suggestion of generating a header syndrome (Reed-Solomon) (Woo: col. 4, lines 50-57 and col. 9, lines 28-43); and identifying bits in error using said header syndrome (Woo: col. 4, lines 50-57 and col. 9, lines 28-43); wherein when a single bit in error is identified in the header, correction of said bit in error is performed (Woo: col. 4, lines 50-57 and col. 9, lines 28-43).

Applicants submit that Woo does not address the bit level or even separately address headers and payloads. Thus, this rejection is deficient and is overcome.

The Examiner admits that Nishimura in view of Woo do not expressly disclose that when multiple bits in error are identified in the header, an ATM containing said multiple bits in error is dropped and replaced by an idle/unassigned cell; however, Examiner takes official notice that this is well known in the art. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to drop a cell that cannot be corrected as is well known in the art.

The Examiner's unwarranted and liberal use of Official Notice is challenged. Applicants respectfully request the Examiner to provide an example of a documented case in which an errored cell is replaced by an idle cell and not discarded. Applicants submit that such teaching is not in the prior art.

Claim 32

The Examiner comments with regard to claim 32, that Nishimura suggests that the encoder further comprises: a cell preprocessor for receiving a cell stream data (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49), monitoring header bytes of incoming cells (col. 4,

line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49), detecting idle/unassigned cells and outputting cell data (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49).

However, there is no detector operative on the input cell stream that detects idle cells. Any idle bits are generated internally to the system of Nishimura.

The Examiner also asserts that there is a frame assembler for receiving said cell data from said cell preprocessor (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49), assembling data in a frame and outputting the frame (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49); an encoder unit for receiving said frame and encoding said frame according to a predetermined coding scheme (col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49). The Examiner admits that Nishimura does not disclose an interleaver for interleaving and transmitting said frame to said wireless interface. The Examiner asserts that Woo teaches, in a wireless system, interleaving frames together in order to reduce the impact of errors on the data stream (col. 9, lines 28-43). The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to have an interleaver for interleaving and transmitting the frame to the wireless interface in order to reduce the impact of errors on the data stream.

Applicants respectfully submit that the Examiner has indulged in hindsight in attempting to modify Nishimura to have an interleaver technology, without any teaching or motivation. There is no recognition that errors were a great concern in Nishimura, as already noted, as the focus is on bandwidth efficiency. Such focus is contrary to a desire for greater accuracy, as already asserted.

Claim 33

With regard to claim 33, the Examiner admits that Nishimura does not disclose that the decoder further comprises: an acquisition and synchronization unit for receiving previously encoded cell data from a wireless interface, searching for a predetermined synchronization pattern in the previously encoded cell data, declaring a synchronization pattern, and outputting interleaved cell data. The Examiner also admits that there is no byte deinterleaver for deinterleaving the interleaved cell data received from the acquisition and synchronization unit, deinterleaving the interleaved cell data and outputting deinterleaved cell data; a decoder for decoding said deinterleaved cell data received from the byte deinterleaver according to a

predetermined coding scheme and outputting decoded cell data; and a cell assembler for receiving said decoded cell data, assembling the decoded cell data into said another cell stream sequence, and outputting said another cell stream data to said wireline interface for transmission via said wireline link. Woo teaches, in a wireless system, interleaving frames together in order to reduce the impact of errors on the data stream (col. 9, lines 28-43). The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to have an interleaver for interleaving and transmitting said frame to said wireless interface in order to reduce the impact of errors on the data stream.

The Examiner asserts that Woo also teaches the use of a synchronization pattern in order to aid in synchronization (col. 4, lines 50-57). It would have been obvious to one of ordinary skill in the art at the time of the invention to use synchronization patterns in order to achieve synchronization. Thus, the Examiner concludes that Nishimura in view of Woo suggests the decoder comprises: an acquisition and synchronization unit for receiving previously encoded cell data from said wireless interface, searching for a predetermined synchronization pattern in said previously encoded cell data, declaring a synchronization pattern, and outputting interleaved cell data (Woo: col. 4, lines 50-57 and col. 9, lines 28-43); a byte deinterleaver for deinterleaving said interleaved cell data received from said acquisition and synchronization unit, deinterleaving said interleaved cell data and outputting deinterleaved cell data (Woo: col. 4, lines 50-57 and col. 9, lines 28-43); a decoder for decoding said deinterleaved cell data received from said byte deinterleaver according to a predetermined coding scheme and outputting decoded cell data (Nishimura: col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49); and a cell assembler for receiving said decoded cell data, assembling the decoded cell data into said another cell stream sequence, and outputting said another cell stream data to said wireline interface for transmission via said wireline link (Nishimura: col. 4, line 46-col. 5, line 54 and col. 6, line 32-col. 7, line 49).

This claim would be patentable for the same reasons given with respect to parent claim 31. Woo does not remedy the deficiencies already noted in Nishimura. Nishimura does not concern a wireless environment where burst error and accurate transmission of information is a great concern. There is no teaching of a communication between wireline and wireless systems using appropriate interfaces with encoding and decoding of the cell stream data, as claimed in

claim 31. Moreover, Woo does not teach or suggest any modification of Nishimura in a manner that would result in the specified encoding and decoding of the cell stream data. Finally, with regard to the added detail of claim 33, Woo does not teach or suggest that in the claimed environment of a transition from wireline to wireless communication in sending a given cell stream, one skilled in the art would know to use interleaving during the wireless transmission and to apply a synchronization pattern for detection of the encoded wireless transmission so that the original wireline cell stream can be reestablished and conveyed to another wireline system. Each of Nishimura and Woo deal with the wireline and wireless systems individually, and do not contemplate the needed encoding, interleaving, deinterleaving and decoding processing as claimed.

Claims 15 and 16 are rejected under 3 5 U.S.C. 103(a) as being unpatentable over Carr (USPN 5,293,379) in view of Naimpally et a1 (USPN 5,650,825). This rejection is traversed for at least the following reasons.

Claim 15

Regarding claim 15, the Examiner asserts that Carr discloses a method of transmitting data over a link comprising the steps of receiving a plurality of packets each having a header and a payload, said header including at least one field (length) (col. 5, line 46-col. 6, line 20); dropping said at least one field (length) from said header of each packet to thereby leave an unoccupied byte space in said header (col. 5, line 46-col. 6, line 20). The Examiner admits that Carr does not expressly disclose that a Header Error Correction (HEC) byte is dropped; however, Carr does disclose that Error Correction information (FCS) may be dropped from a frame (col. 5, line 46-col. 6, line 20). It would have been obvious to one of ordinary skill in the art at the time of the invention to drop the HEC since the HEC is "recalculatable" and thus the information can be derived at the receiver. The Examiner admits that Carr also does not disclose that the link is a wireless link or that the data is ATM cells; however, Examiner takes official notice that wireless links are well known in the art as well as ATM cells. Thus, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to use a wireless link and ATM cells. Additionally, the Examiner admits that Carr does not disclose inserting other non-HEC information into said unoccupied byte space; and transmitting each of said plurality of ATM cells. However, the Examiner asserts that Naimpally teaches using

idle/unassigned cells to transport additional information in order to take advantage of otherwise wasted bandwidth (col. 4, lines 15-40; col. 4, line 66-col. 5, line 5; and col. 12, lines 1-7). It would have been obvious to one of ordinary skill in the art at the time of the invention to insert other non-HEC information into the unoccupied byte space in order to take advantage of otherwise unoccupied bandwidth.

The claim requires dropping at least one Header Error Correction (HEC) byte from the header of each ATM cell to thereby leave an unoccupied byte space in the header and inserting other non-HEC information into the unoccupied byte space. Carr merely teaches at col. 5, line 46-col.6, line 20 that the FCS can be stripped from a packet and regenerated, or the length field zeroed and regenerated at the receiving end. However that is not a specific teaching that at least one HEC byte is deleted and another non-HEC information placed into the unoccupied space. The insertion of added information is contrary to the goal in Carr to simply compress the transmitted data. The Examiner admits this expressly. However, the Examiner turns to Naimpally for a teaching of using idle/unassigned cells to transport additional information. This reliance on a broad and general principle does not provide the specific teaching needed to render the claimed invention obvious.

Applicant respectfully submits that the elimination of at least one HEC byte is nowhere suggested. Moreover, the substitution of non-HEC information is nowhere suggested. The unique concerns in a wireless environment, where burst errors are a major problem, with having an accurate error correction protocol leads one skilled in the art toward having more, not fewer bytes in the HEC. Applicants have taught and now claimed the manner in which higher efficiency wireless transmissions can be accomplished while preserving the accuracy and reliability that is desired.

Claim 16

Regarding claim 16, the Examiner asserts that Carr in view of Naimpally discloses regenerating said Header Error Correction byte from the remaining bytes in said header of each ATM cell after transmission of each cell (Carr: col. 5, line 46-col. 6, line 20).

This claim would be patentable for the reasons given with respect to claim 15. Moreover, there is no teaching in any of the applied art of regenerating the original HEC from a truncated transmission.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (USPN 5,892,770). This rejection is traversed for at least the following reasons.

Claim 30

As to claim 30, the Examiner asserts that Wolf discloses a method of restoring an ATM cell stream sequence comprising the steps of: recording the original positions of idle/unassigned cells in a cell stream sequence before being moved during assembly of an ATM frame prior to transmission of said frame over a link (col. 2, line 37-col. 3, line 13 and col. 6, lines 35-56) where, as broadly defined, the positions are recorded since the structural data "are distributed as spaced apart data in accordance with a specified instruction"; and restoring said original positions of said idle/unassigned cells within said cell stream based upon said recorded original positions after transmission of said frame over a link (col. 7, line 56-26). Wolf does not expressly disclose that a wireless link is used; however, Examiner takes official notice that wireless transmission is very well known in the art. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to transmit the ATM stream over a wireless link.

The invention concerns recording the original positions of idle/unassigned cells in a cell stream sequence before being moved during assembly of an ATM frame prior to transmission of said frame over said wireless link. Then the original positions of the idle/unassigned cells within the cell stream are restored based upon the recorded original positions. Nothing in Wolf teaches this process. While Wolf discusses converting from a first data stream to another for purposes of

changing a transmission rate, there is no teaching of having positions recorded. Moreover, there is no teaching of using such recorded information to restore the data stream.

The Examiner also admits that there is no mention of a wireless link. The Examiner asserts by official notice that such transmissions are known. However, that assertion does not provide a solution to a problem with wireless links that the Applicant discloses and claims. Applicant is not claiming wireless systems. Instead, the claim is to a specific problem in a wireless system where burst errors and transmission problems present unique challenges and every aspect of cell-type transmissions used in wireline environments involves special challenges and requires special and unique solutions. The Examiner has not provided the needed recognition of a problem with the attendant solution that would allow Wolf to preclude the patentability of the claimed invention.

Claims 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woo et al (USPN 5,425,101) in view of Scarpa (USPN 5,444,743). This rejection is traversed for at least the following reasons.

Claim 34

With regard to claim 34, the Examiner assert that Woo discloses a method for decoding interleaved and encoded data received over a wireless link comprising: detecting a predetermined synchronization pattern in said encoded data received over said wireless link (col. 4, lines 50-57); passing said data to a deinterleaver and decoder when said predetermined synchronization pattern has been detected (col. 6, line 32-col. 7, line 49); determining a number of bytes in error in said data (col. 6, line 32-col. 7, line 49). Woo does not expressly disclose declaring a synchronization mode when the number of bytes in error between successive synchronization patterns is less than a predetermined number. The Examiner asserts that Scarpa teaches, in a communication system, declaring a synchronization mode when the number of bytes in error between successive synchronization patterns is less than predetermined number (col. 1, line 57-col. 2, line 28) where it is implicit that this is done in order to ensure that synchronization is properly achieved. It would have been obvious to one of ordinary skill in the art at the time of the

invention to declare a synchronization mode when the number of bytes in error between successive synchronization patterns is less than a predetermined number in order to ensure that synchronization is properly achieved.38. Regarding claim 35, referring to claim 34, Woo in view of Scarpa discloses that the step of detecting includes setting a pattern search window of a predetermined number of bytes (Scarpa: col. 1, line 57-col. 2, line 28).

The invention specifically concerns the transmission of a data stream along with a predetermined synchronization pattern, then detecting the predetermined synchronization pattern in encoded data received over a wireless link, and finally deinterleaving and decoding the data when the predetermined synchronization pattern has been detected. In this process, there is an express requirement for determining a number of bytes in error in the data. Based on that determination, a synchronization mode is declared when the number of bytes in error between successive synchronization patterns is less than a predetermined number.

Woo has no teaching related to determining the number of bytes in error in the data, particularly at col. 6, line 32 to col. 7, line 49 as cited by the Examiner. The Examiner admits that Woo does not disclose declaring a synchronization mode when the number of bytes in error between successive sync patterns is less than a predetermined minimum. This, of course, is consistent with a complete absence of any teaching with regard to determining a number of bytes in error. Scarpa cannot remedy this deficiency. Scarpa concerns pattern matching, not determining a number of bytes in error. This is a wholly different concept that does not lead one skilled in the art toward Applicant's number-based error determination invention.

Claims 35-37

As to these claims, the Examiner asserts that Woo in view of Scarpa discloses the added limitations provided by these dependent claims, including declaring an identification of said synchronization pattern when a predetermined number of bytes of data are detected as matching said predetermined synchronization pattern (Scarpa: col. 1, line 57-col. 2, line 28)

These claim all focus on the number-based implementation disclosed and claimed, and would be patentable for the reasons given for parent claim 34.

Regarding claim 37, the Examiner admits that Woo in view of Scarpa does not disclose that the predetermined number of bytes is two but asserts that Woo in view of Scarpa does disclose that there is a predetermined number of bytes (Scarpa: col. 1, line 57-col. 2, line 28). The Examiner asserts that it is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The Examiner states that the burden of showing criticality is on applicant, citing In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. V. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108,65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); re Saether, 492 F.2d 849, 18 1 USPQ 36 (CCPA 1974); Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272,205 USPQ 215 (CCPA 1980). The Examiner concludes that Woo in view of Scarpa discloses that there is a predetermined number of bytes, and that any number of bytes, including two bytes, would have been obvious absent a showing of criticality by Applicant.

Applicant has demonstrated in disclosing the invention that the use of a number of bytes is a critical limitation and, with respect to the number 2, the disclosure clearly teaches that such number is preferred.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woo et al (5,425,101). This rejection is traversed for at least the following reasons.

Claim 38

The Examiner asserts that Woo et al teaches a method for decoding interleaved and encoded data that is transmitted and received over a wireless link comprising: deinterleaving the data and rearranging said data into a predetermined frame (col. 4, lines 50-57 and col. 9, lines 28-43); decoding said data according to a predetermined coding scheme (col. 4, lines 50-57 and col. 9, lines 28-43); and detecting if any cells within a Header frame within said predetermined frame are uncorrectable (col. 4, lines 50-57 and col. 9, lines 28-43).

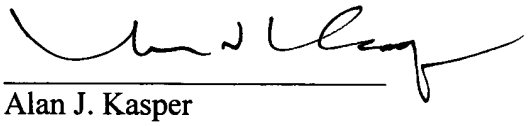
Applicants submit that Woo does not expressly disclose replacing detected uncorrectable cells with idle un-assigned cells. The Examiner takes official notice that this is well known in the art. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to drop a cell that cannot be corrected as is well known in the art.

Applicant submits that such feature, which is specifically related to a header and applied to the environment of a wireless link, is not shown in the prior art and respectfully requests the Examiner to support his assertion with clear evidence that substitution of uncorrectable cells within a header with idle/unassigned cells is known, or withdraw the rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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